Agronomy "Crib" Notes

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Spring Management of Cover Crops

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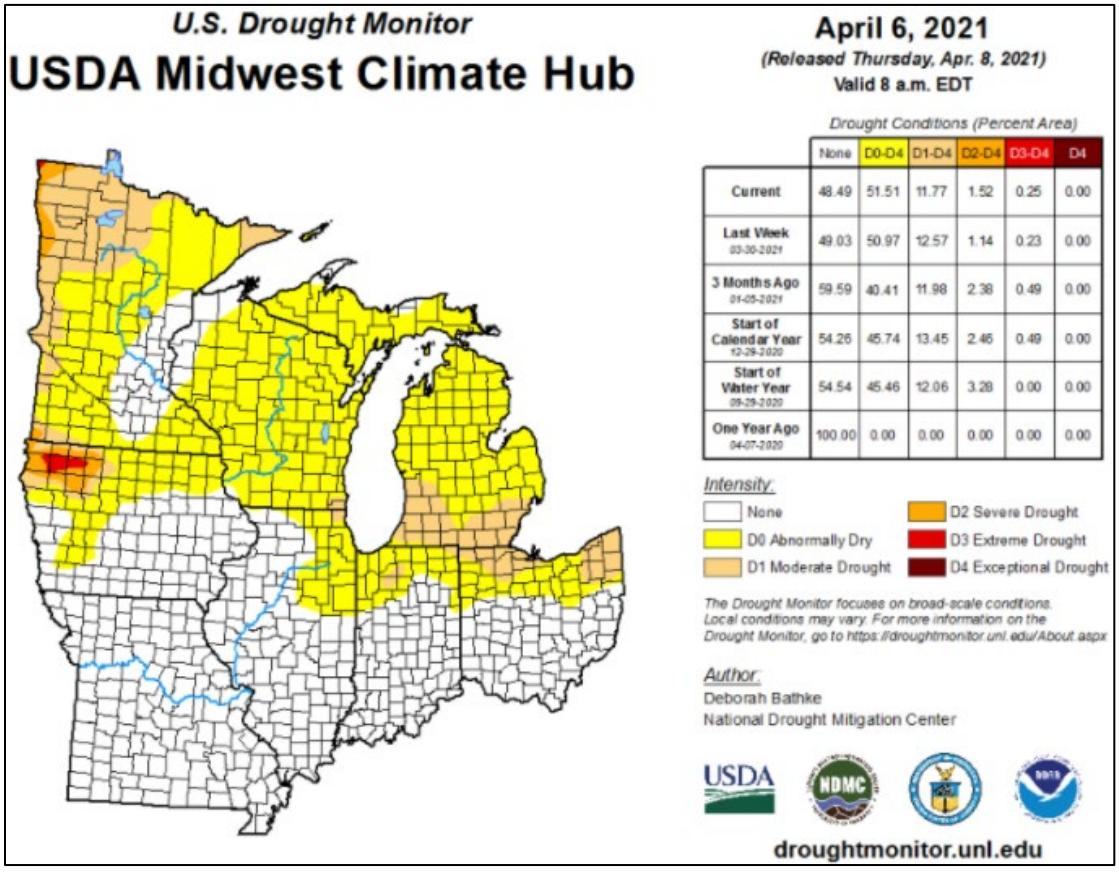
Every year is different, and spring of 2021 seems to be coming early! It's mid-April and across the state, we are already hearing reports of farmers planting and questions are coming in about cover crop termination. Now is a good time to review spring management of cover crops, especially if you're new to using cover crops.

Termination Strategy and Timing

Farmers are wondering what herbicides they can use to terminate their cereal rye and annual ryegrass cover crops. Know what cover crops need to be terminated – cereal rye and annual ryegrass are NOT the same, and the approach and timing will differ with weather and growing conditions across the state. Keep in mind, not many days ago, it was 17°F! It is critical that the cover crop is actively growing before you can kill it with translocated or systemic herbicides such as glyphosate. A best management practice is to monitor daily average temperatures and wait until you have two or three consecutive nights above 50°F before spraying a burndown for cover crop termination. Spray when the sun is shining when possible, and during the warmest part of the day. This is especially critical when it comes to annual ryegrass – a rule of thumb is not to terminate annual ryegrass until you have mowed your lawn at least two times. Hopefully only cover crops are in the field but scout for weeds and adjust your termination plan accordingly.

According to the US Drought Monitor, the northern ¼ of Indiana is listed as abnormally dry and parts of three counties are in a D1 drought. In these areas, consider terminating cover crops early to preserve soil moisture.



https://droughtmonitor.unl.edu/CurrentMap/StateDroughtMonitor.aspx?Midwest

In areas where there is sufficient or excessive soil moisture, the cover crop is pulling some of the excessive water out of the soil profile, competing with winter annual weeds and preventing small seeded broadleaf summer annual weeds from getting the sunlight they crave. In these areas and depending on your cover crop experience, either terminate the cover crop 10-14 days before planting or wait to terminate your cover crop until right before planting. For those new to cover crops, termination 10-14 days before planting will allow for the cover crop residue to begin breaking down.

Remember - when cereal rye gets over 24 inches, or seed heads emerge, it is usually better to not spray more than a day or two ahead of the planter, or plant first and terminate immediately after. If the cover crop begins to die and we get rain, the soil may stay wet even longer and the planter will have a more difficult time cutting through rubbery half-dead stems.

Pay close attention to all pesticide formulations…they are not all the same. Read and follow all pesticide label directions! Contact your local extension office, crop advisor, or Purdue University for spraying recommendations. Be aware of pesticide antagonism. Mixing certain pesticides together can make each of them less effective.

Planter Set-up and Adjustments

A field planted to cover crops will be in different condition than a field without a cover crop or a tilled field. Calibrate the planter so it can handle the cover crop residue. This may mean recalibrating the planter not just between fields but within the field as well. Temperatures and soil conditions can change throughout the day so evaluate the planter setup often and make sure that the seed slot is properly closed at planting and seeds are at desired depth.

Nutrient and Pest Management

If planting to corn, apply 50-70 units of nitrogen in the field at planting or very early side-dress to help get the corn off to a good start, especially if following a maturing cereal grain. Nutrient tie-up can be an issue with corn following a grass cover crop like cereal rye, especially if the cover crop is mature. This is due to the soil microbes using the available nitrogen in the soil to break down the residues which will eventually result in a release of nutrient to the growing crop. Until that release occurs, nitrogen is immobilized and unavailable to the young corn crop.

Also, make sure to scout fields early and often for pests and beneficials. See Agronomy Technical Notes High Residue IPM Insects #14, Weeds #15 and Diseases #16 for more details.

Keep at it and don't go it alone!

If you have any questions, contact your local NRCS or Extension office before proceeding when possible. Look to other farmers in your area or on-line that are terminating cover crops and get advice from them. When in doubt, reach out! There are many people and tools available to assistance you during this time.

Reminders & Additional Resources

Past issues of Agronomy Crib Notes are located at: http://www.in.nrcs.usda.gov/technical/agronomy/agronomy.html

Purdue Pest and Crop Newsletter: https://extension.entm.purdue.edu/newsletters/pestandcrop/
Purdue Extension WS-52-W, Dec 2015: Successful Annual Ryegrass Termination with Herbicides
Purdue Extension WS-50-W, April 2012: Successful Cover Crop Termination with Herbicides
Purdue Weed Science, Mar 2012: The Influence of Spray Water Quality on Herbicide Efficacy
Purdue Extension PPP-96, rev 2020: Measuring Pesticides - Overlooked Steps to Getting the Correct Rates
Purdue Extension PPP-86, Nov 2009: The Impact of Water Quality on Pesticide Performance
Purdue Extension AY-356-W, May 2019: Cover Crop Recipe: Post Corn, Going to Soybean
Purdue Extension AY-357-W, May 2019: Cover Crop Recipe: Post Soybean, Going to Corn
OSU Bulletin 789/Pub WS-16, 2021: 2021 Weed Control Guide for Ohio, Indiana and Illinois

Find an NRCS office near you: https://www.nrcs.usda.gov/wps/portal/nrcs/in/contact/local/

Midwest Cover Crops Council – additional cover crop termination references.

USDA-NRCS- Cover Crop Termination Guidelines Version 4, June 2019.

USDA-RMA - Cover Crops and Federal Crop Insurance: Fact Sheet, revised June 2019